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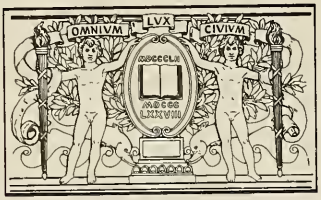

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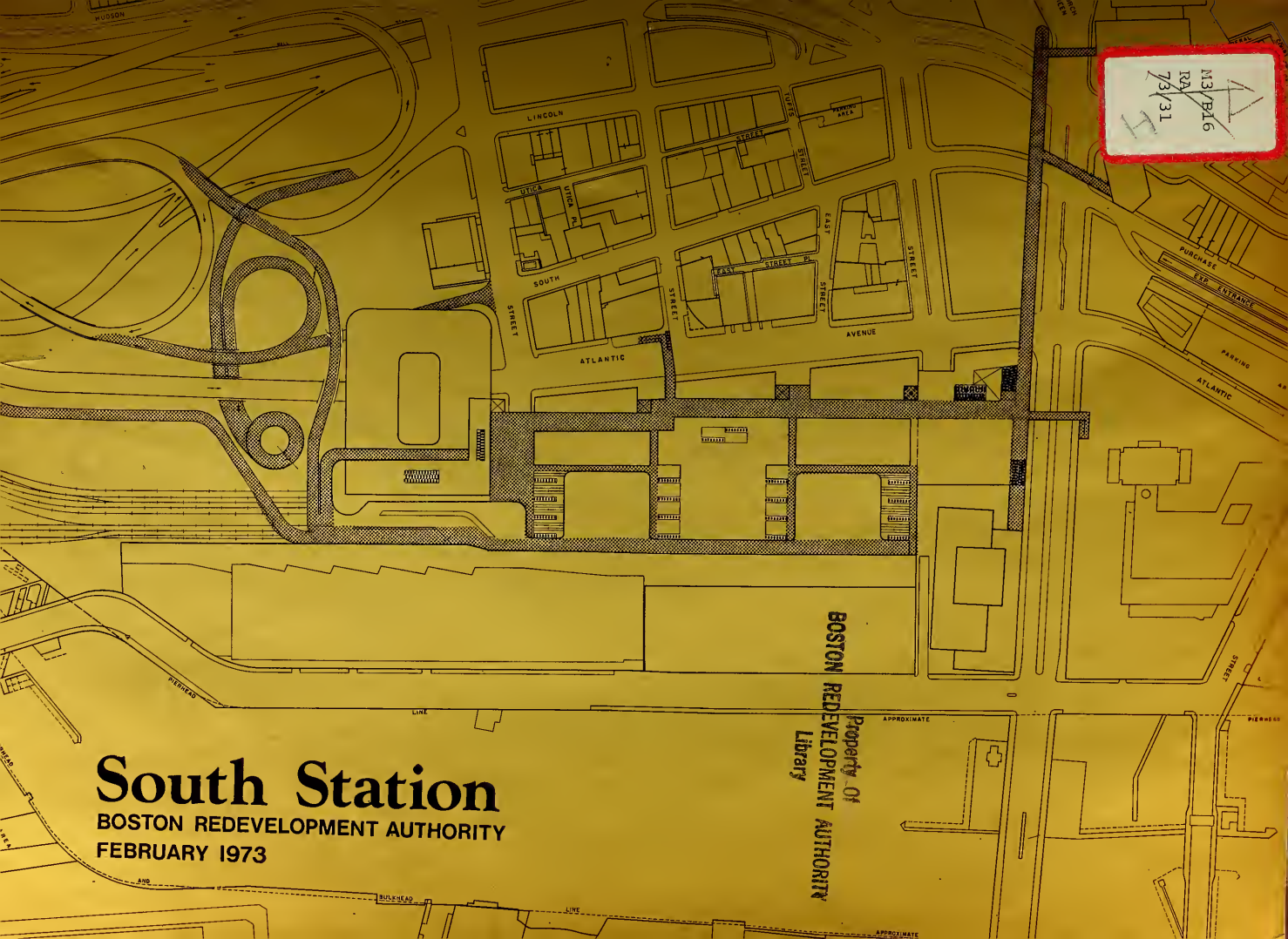

South Station

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SOUTH STATION URBAN RENEWAL AREA

MASSACHUSETTS R-82

FEBRUARY 1973

prepared by

Boston Redevelopment Authority Staff

Robert T. Kenney, Director

Gov Doc
Plate only

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SOUTH STATION

I. PROGRAM DEVELOPMENT

The developer shall engage a qualified architectural consultant, satisfactory to the BRA, to prepar a Master Plan of the Project Area for purposes of coordinating the planning and design of the development program to include, but not be limited to, the following:

A. Public Elements

(1) Garage

3500-5000 spaces which might include 1000-1300 spaces for the exclusive use of the Post Office on terms, either purchase or lease, which are acceptable to the Post Office and the BRA. The garage can be operated publicly or privately, but in either case the fee schedule, lease and operating arrangements must be subject to BRA approval.

(2) Bus Terminal

100-125 bay bus terminal which can be leased or sold to a private company or public agency on terms which would accommodate short, long-run and commuter carriers and subject to BRA approval.

(3) Rail Facilities

2,200 square feet of office space, 30,000 square feet for passenger services, 15,200 square feet for rail operations, and approximately 40,000 square feet for freight handling. This space will be leased to the railroad on terms consistent with the existing agreement between the BRA and the railroad.

(4) Public Space

Between 150,000 and 250,000 square feet of space should be created for various types of pedestrian-related amenities including waiting areas for the bus and rail facilities, a climate-controlled enclosed galleria with ancillary retail and commercial activities, and space for a moving sidewalk to be installed and operated by the BRA of City running through the development on the second level parallel to Atlantic Avenue, with pedestrian bridges crossing Summer Street and Atlantic Avenue.

B. Private Elements

To include, but not be limited to, a 500-1000 room hotel and a minimum of 100,000 square feet of retail/commercial space, to be constructed on air rights over the garage/transportation facility.

C. Location

Development elements shall be constructed in approximately those areas shown on the attached plans. The exact location will be determined by the Master Plan subject to BRA approval.

D. Design Controls

The developer and architectural consultant shall work closely with and conform to the design objectives of the BRA as set forth on the attached statement (Exhibit B). Design controls include architectural, engineering and traffic considerations. Any changes or deviations from the design objectives shall require BRA approval.

II. DEVELOPER'S FINANCIAL REQUIREMENTS

A. Development of Master Plan

To include necessary drawings and model of proposed development for submission to BRA in accordance with the Design Review Process. The drawings shall be sufficient to support preliminary cost estimates. (See Exhibits A and B)

B. Conduct market studies to determine:

(1) commercial hotel needs with emphasis on size and type of convention facilities and number of guest rooms.

(2) "mix" of retail support facilities and staging of construction.

(3) type of office space required by potential users.

C. Economic Feasibility Study

Conduct economic feasibility studies to determine feasibility of development program.

D. Relationship to Other Developers

Develop and coordinate working relationship with existing and proposed land owners (i.e., Post Office, Stone and Webster, Arena, Railroad, etc.) to insure that BRA obligations to said owners are assumed or complied with by the developer.

E. Relationship to Prospective Users

The developer will offer space for lease and/or purchase by prospective users. The Authority will review and approve the lease or purchase terms of any proposal to any client who will occupy more than 100,000 square feet of space. The Authority reserves the right to negotiate directly with prospective lessees or buyers in matters of concern to the City.

F. Land Cost

Purchase of the entire site at a price to be established by the BRA, subject to HUD concurrence, generally estimated between $10-$15 million based upon final development program.

G. Essex Street Extension

Construction and maintenance of the extension of Essex Street six

lanes, from Atlantic Avenue to garage access ramps as shown in accompanying drawings for purposes of servicing vehicular traffic to the project area.

H. Support Platform

Construction of a landscaped platform over the parking facility which would support air rights development.

I. Real Estate Taxes

Payment of real estate taxes in accordance with existing City Assessing practices or under a 121A development corporation.

III. PERFORMACE SCHEDULE

1. Within 2 months:

a. Preliminary economic feasibility analysis of the development.

2. Within 4 months:

a. Detailed economic analysis establishing maximum construction costs of the development elements.

3. Within 6 months:

a. Master Plan which would detail the location of the respective uses and define the relationship of these elements as specified in I. PROGRAM DEVELOPMENT and EXHIBIT B. Design Controls.

b. Development schedule for the entire development program, and financing plan which would serve as the basis for final designation.

4. Within one year: commence construction of the garage, rail facilities and bus terminal and any other development element as provided in BRA approved plan.

IV. PUBLIC OBLIGATIONS

In return for the developer's commitment to the above, the BRA would undertake to perform the following:

1. Obtain funds for the construction of ramps which would service the garage from the Turnpike and Southeast Expressway.

2. Apply for funds necessary to construct the moving sidewalk.

3. Installation and operation of moving sidewalk.

4. Realign Summer Street.

5. Relocate the sewer interceptor.

6. Complete the demolition in accordance with the attached schedule.

7. Provide for the construction of the MBTA kiosk at Atlantic Avenue and Summer Street.

EXHIBIT A

ARCHITECTS' REQUIREMENTS

The Master Plan, including consultants reports with data upon which the design is based, shall be presented within six months of tentative designation.

A. Plan Diagrams at 1" = 40'-0"

1. Vehicular circulation showing access and egress of private autos, buses, taxes, and service vehicles.

2. Pedestrian circulation showing movements from MBTA, garage, arena lobby, and waiting areas for bus and train.

3. Space use.

4. Construction phasing.

B. Floor Plans at 1" = 40'-0"

1. Street level, Pedestrian Concourse level, and other levels involving public use.

2. Typical garage level.

3. Typical upper levels showing private use elements.

4. Basement level showing truck service system.

C. Sections at 1" = 16'-0"

1. Typical cross-sections at various points through garage and Pedestrian Galleria.

2. Longitudinal sections through

   a. Pedestrian Galleria

   b. Great Space

3. Perspective sections or isometrics describing the Great Space.

D. Transportation drawings at 1" = 40'-0"

1. Profiles of all vehicle ramps.

2. Cross sections of all vehicular ways.

3. Data on turning radii.

E. Perspective Sketches (no scale)

1. Eye-level along Summer Street

2. Eye-level along Atlantic Avenue

F. Study models at 1" = 40'-0"

1. General massing model.

2. 3-dimensional diagram showing relationship between elements.

G. Presentation model at 1" = 100'-0"

EXHIBIT B

DESIGN CONTROLS

I. Public Elements

South Station is planned as the major transportation center for the Boston Region, and shall include facilities for intercity and commuter rail and bus service, MBTA rapid transit, auto parking, and connecting public spaces.

A. Parking Garage (See Fig. 1)

1. Location: the garage is to be built on air-rights above the railroad in the area immediately to the west of the Post Office.

2. Functional Requirements

a. Direct vehicular access and egress to public road including:

i. 2 lanes to Massachusettts Turnpike, one in and one out

ii. 2 lanes to Southeast Expressway, one in and one out

iii. 3 lanes to Kneeland Street, reversible

iv. 3 lanes to Essex Street, reversible

v. 2 lanes to Beach Street, reversible

vi. 2 lanes to East Street, reversible

b. Vehicular access from Summer Street immediately to the west of the Stone and Webster Parcel is desirable.

c. Pedestrian connections from garage levels to:

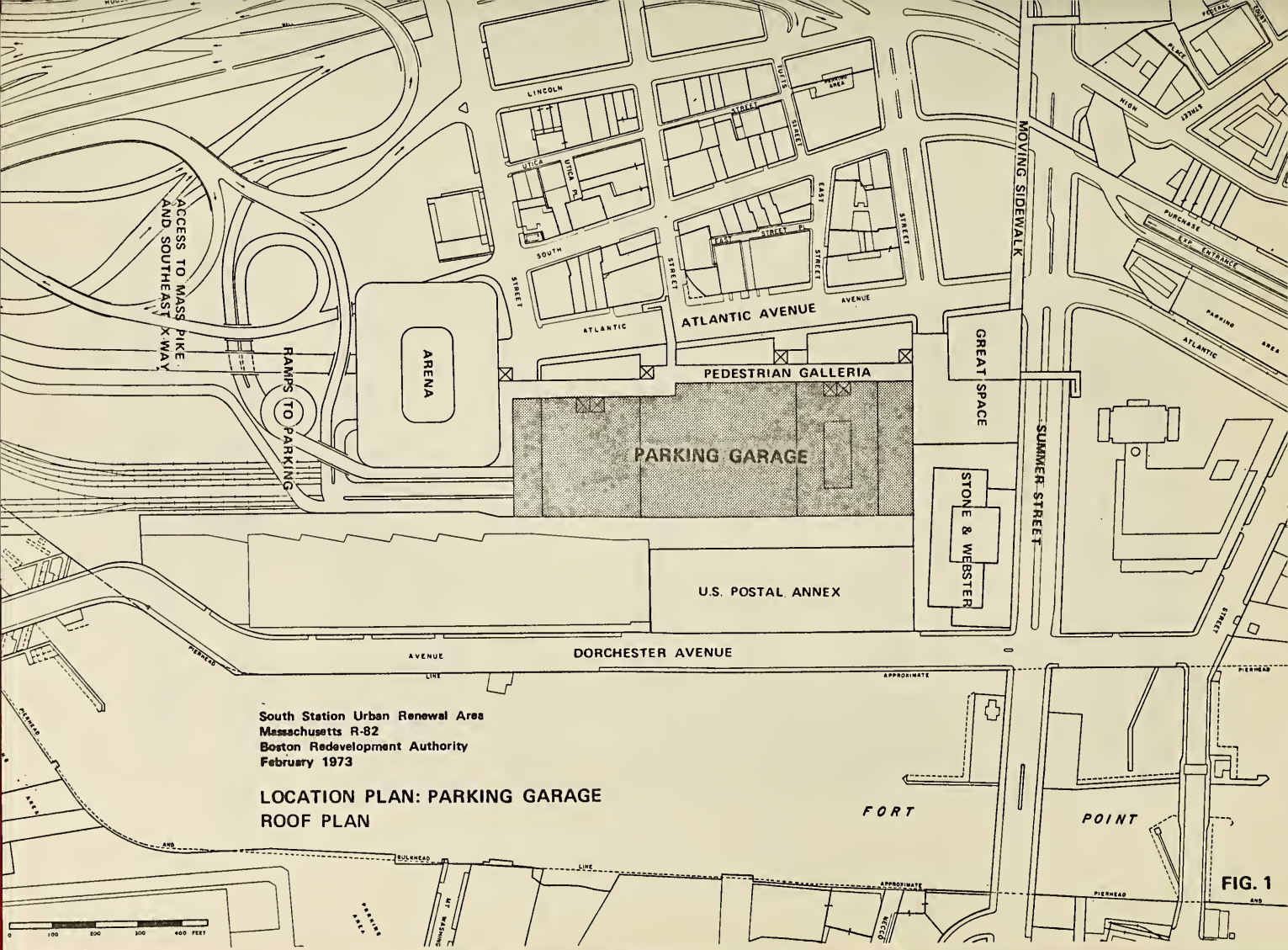
i. Pedestrian Concourse at Second Level, via elevator cores spaced not more than 350 feet apart along the moving sidewalk.

ii. Arena, at all seating levels to allow ticket holders direct access to seating.

d. Vehicle ramps connecting garage with drop-off/pick-up areas at Pedestrian Concourse Level (Level 2) to allow driver to deposit passengers at various destinations within the South Station Complex and then park his car.

e. Separate access from Dorchester Avenue to Post Office parking spaces is required (cost attributable to Post Office)

f. Pedestrian access from garage to Post Office is required.



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LOCATION PLAN: PARKING GARAGE ROOF PLAN

FIG. 1

3. Design Requirements

   a. Garage structure must allow for future development of air-rights above garage without interruption of garage functions.

   b. Structure must conform to the proposed 8-track scheme.

   c. The lowest parking level shall be at el. = 70'

   d. Typical dimensional requirements

      i. Parking bays = 64'x9'

      ii. Allowable radius of ramp = 30' min. inside

   e. The garage shall be covered by a landscaped roof deck in those areas not developed for private uses. The deck may be developed for recreational facilities, public or private open space, etc.

   f. All access ramps from the surface streets must be reversible.

   g. At least 2 ticket spitters and 2 payment booths must be provided for each traffic lane entering the garage.

   h. The developer must provide electronically controlled signs at the points where the garage ramps leave the main highway or street. These signs must be capable of warning patrons of conditions that would prevent further movement along the ramp.

B. Rail Facility (See Figs. 2 and 3)

   A modern rail terminal with 8 new tracks for expanded rail service to New York and increased commuter use, with space requirements as per the Gladstone Report of 17 April 1972.

   1. Location: existing track easement of 194' width with rail-head cut-back of 116' is to be retained. Alternatively, the tracks may be relocated at the Basement Level. Ticket, waiting, office, and baggage space totalling 87,000 sq. ft. as required in the Gladstone Report, Summary of Space Needs, 17 April 1972, and ancillary retail spaces are located above the tracks at the Pedestrian Concourse Level (Level 2).

   2. Functional Requirements

      a. Rail platforms shall be connected to waiting areas above by banks of escalators spaced not more than 350' apart in order to facilitate boarding of long trains.

      b. Waiting areas shall be adjacent to moving sidewalk at Pedestrian Concourse Level so as to minimize walking distances.

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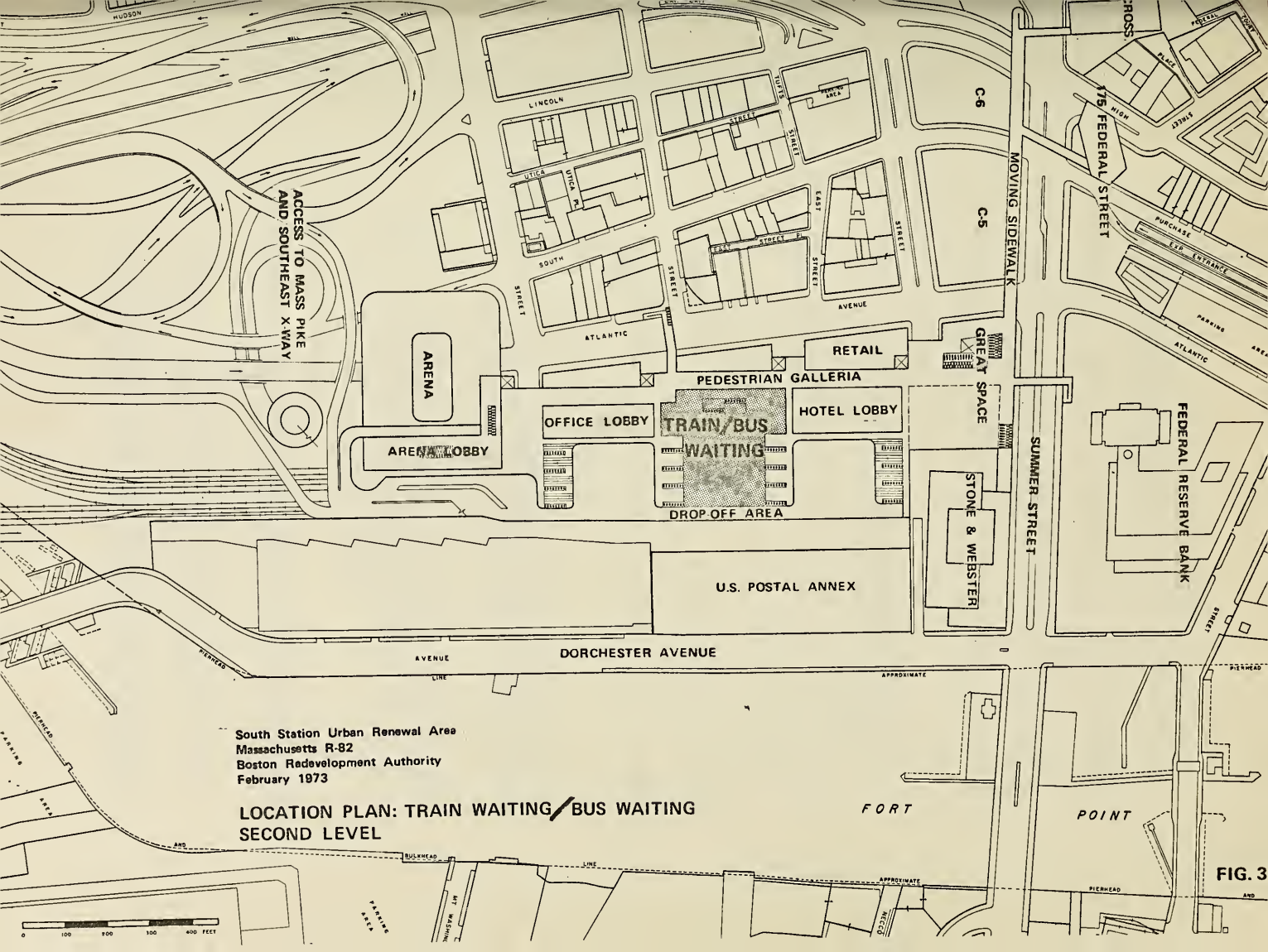
LOCATION PLAN: TRAIN PLATFORMS STREET LEVEL

FIG. 2



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LOCATION PLAN: TRAIN WAITING/BUS WAITING SECOND LEVEL

FIG. 3

c. Waiting, tickets and ancillary use spaces should be shared between rail and bus operators to reduce costs and increase ease of service.

d. Pedestrian access to auto drop-off area shall be provided at Level 2.

e. A pedestrian connection from platforms directly to the MBTA Station may be provided.

f. Provisions for transfer of mail from tracks to Post Office is required.

3. Design Requirements

a. Natural lighting of public waiting rooms through use of skylights and clerestory windows shall be maximized.

b. Views towards surrounding areas shall be provided to help orient the users.

c. The new platform lengths shall be 2 @ 1200', 1 @ 1050' and 1 @ 900'.

d. Easements for railroad tracks and utilities shall be maintained.

e. A system of mechanical ventilation is required for exhausting fumes.

C. Bus Terminal (See Figs. 4 and 3)

MBTA buses, Greyhound, Trailways and their subsidiaries shall be relocated in a centralized facility providing a minimum of 100 bus bays, and waiting, ticket, and office space, totalling 50,000 sq. ft., as outlined in Gladstone Report 17 April 1972.

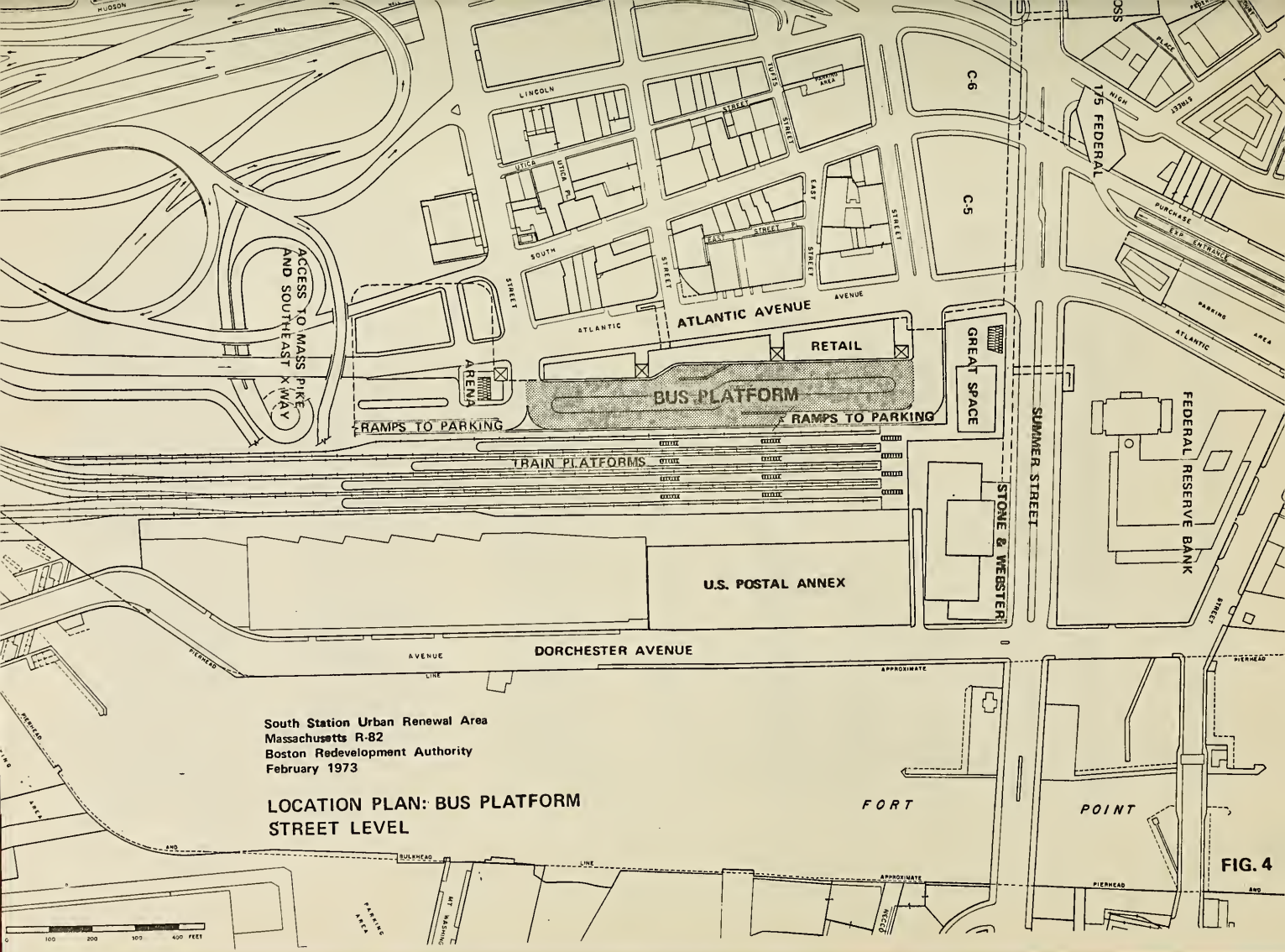
1. Location: Bus bays will be located at grade between Atlantic Avenue and railroad easement and also at the Basement Level directly below the busways at grade. Alternatively, if the railroad tracks are depressed to Basement Level, the buses may occupy the area of existing tracks.

2. Functional Requirements

a. Bus access to platform area shall be from Atlantic Avenue at Essex Street and at Kneeland Street with 2 access lanes at each entrance.

b. Off-street ramps with maximum grade of 6% shall connect the upper and lower levels of the bus terminal.

c. Bus platforms shall be connected with ticket and waiting areas at Pedestrian Concourse (Level 2) via escalators.



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LOCATION PLAN: BUS PLATFORM STREET LEVEL

FIG. 4

d. Waiting areas and ancillary retail uses shall be located at Pedestrian Concourse, Level 2, adjacent to the moving sidewalk.

3. Design Requirements

a. A center island bus platform design is required to eliminate conflict between pedestrians and buses.

b. One half the bus bays shall be drive-thru or parallel type.

c. Waiting areas should provide views of bus arrival and departures below.

d. Waiting areas and other public spaces shall be shared with railroad.

e. Minimum dimension of 2 busways and boarding platform shall be 124'.

f. Baggage facility for long-haul buses shall be provided at Platform Level with elevator connections to the ticket area at the Pedestrian Concourse Level above.

g. Views of the city from waiting room to help orient users is desirable.

h. Natural lighting of public areas shall be optimized.

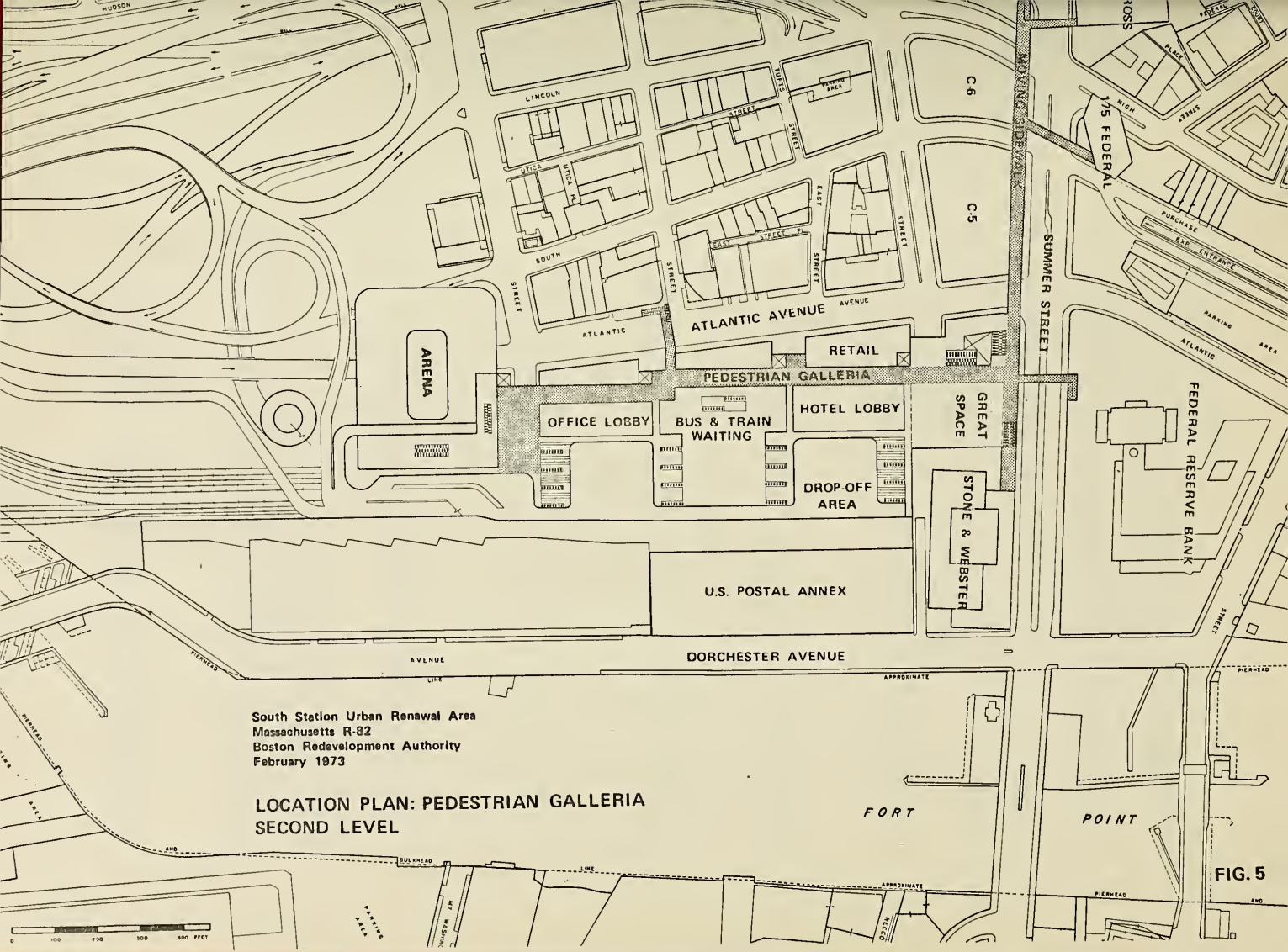
D. Public Spaces

A network of climate controlled, naturally lighted, safe and comfortable public spaces is required to serve as the connective tissue between the elements of the complex (rail, bus, arena, etc.) and to provide a visually prominent major space which will offer a "picture window" on the new Boston.

1. Pedestrian Galleria (See Fig. 5)

A multi-story space, 42' wide with skylighting shall extend between the Great Space and the arena lobby. It shall be designed to accept a moving sidewalk as described in CADS study, Feasibility of Moving Walks, Boston, BRA 1971. The redeveloper shall provide the envelope, climate control systems, lighting, graphics, balustrades, closure panels, access stairs, and all appurtenances except the actual moving sidewalk machinery.

a. Location: the Galleria shall be located parallel to Atlantic Avenue between the garage and Atlantic Avenue at the Pedestrian Concourse Level (Level 2, el. + 50') (i.e. plus or minus 50'). An enclosed bridge connection crossing Atlantic Avenue at Beach Street is desired. A second branch shall run along the south side of Summer Street between the Great Space and Church Green, with enclosed bridge connections crossing Summer Street to the Federal Reserve site, to the C-7 parcel, and to the Blue Cross Building.



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LOCATION PLAN: PEDESTRIAN GALLERIA SECOND LEVEL

FIG. 5

b. Functional Requirements

i. Elevator connections between the Galleria and all garage levels are required at intervals not exceeding 350' along the entire length of the Galleria.

ii. Pedestrian access to bus/train waiting and ticket areas shall be adjacent to the Galleria.

iii. Lobbies of private use elements shall be conveniently accessible from Galleria.

iv. Access from the street to the Galleria shall be provided at several points along Atlantic Avenue.

v. The arena lobby shall be the southerly terminus of the Galleria so that the Galleria can connect the Great Space with the arena lobby.

c. Design Requirements

i. No buildings shall be located in air space above Galleria; the Galleria shall have skylighting.

ii. Retail uses are required along the Galleria to insure an active and safe environment.

iii. Views of the city at several points along the Galleria are required to assist pedestrians in orienting themselves.

iv. The envelopes for Moving Sidewalk machinery includes:

(a) tunnel under each belt of 7' depth.
(b) machine room under both ends of each belt 20'x30'x13' deep.
(c) transformer vault 10'x20'x13' deep under each belt.

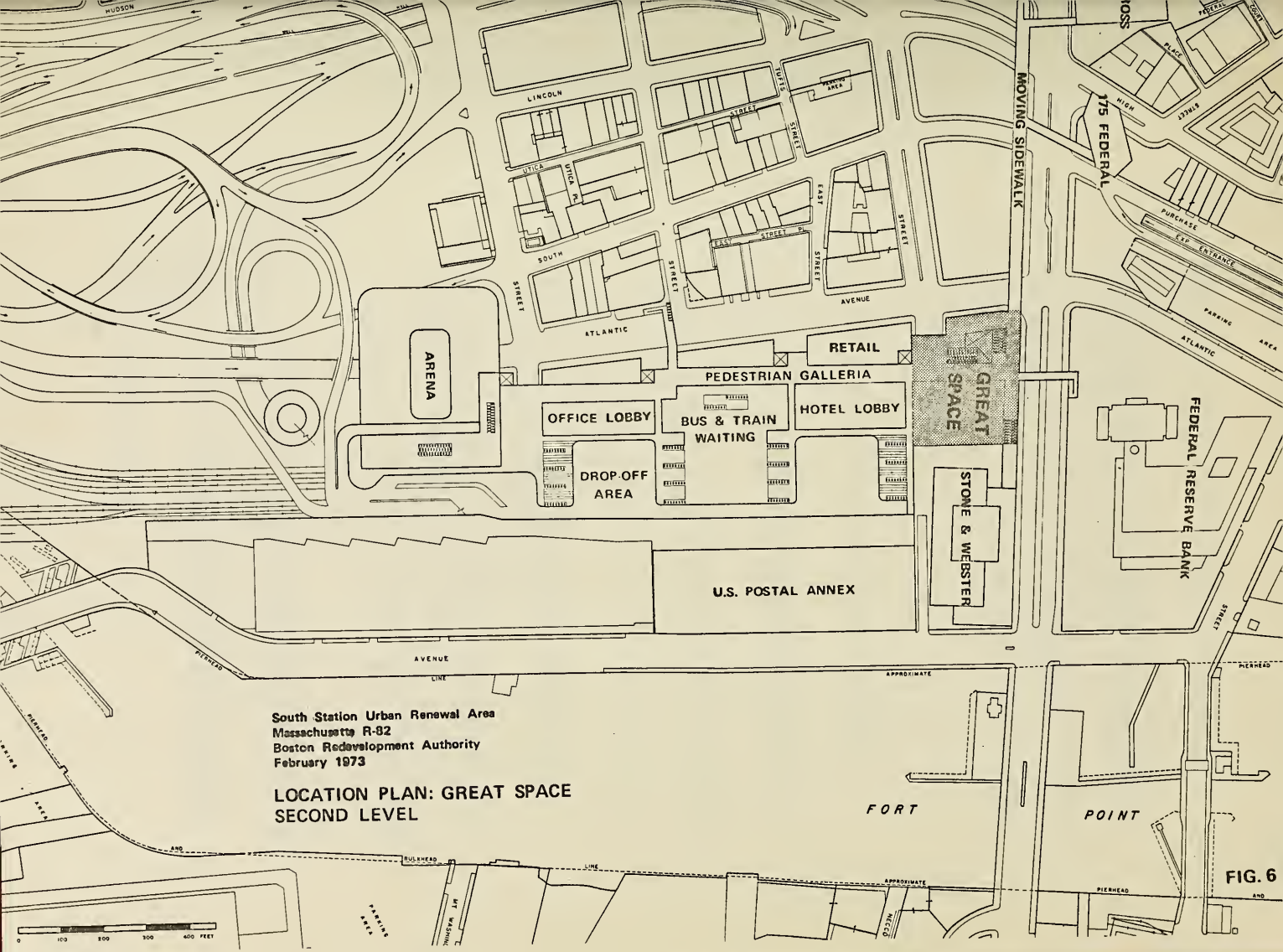
2. The Great Space (See Fig. 6)

A major public space is required to collect and distribute the daily load of 125,000 pedestrians using the public and private facilities. It shall be the most visually prominent element on the Summer Street visual easement.

a. Location: the Great Space shall occupy the corner of Atlantic Avenue and Summer Street with 75,000 sq. ft. at the Pedestrian Concourse Level (Level 2) and with 20,000 sq. ft. min. at street level for the purpose of drawing pedestrians from the street and from the MBTA Station into the Great Space at Level 2, el. + 50'.

b. Functional Requirements

i. The Great Space shall be the terminus of the two branches of the moving sidewalk, one running parallel to Atlantic



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LOCATION PLAN: GREAT SPACE
SECOND LEVEL

FIG. 6

Avenue and the other along Summer Street towards the retail core.

ii. The MBTA concourse at el. ±3' shall be extended into the space and connected by escalators to the Pedestrian Concourse Level (Level 2, el. ±50)

iii. Escalator connections between street level (el. ±20') and the Pedestrian Concourse Level are required.

iv. Enclosed pedestrian bridge connections shall be included to:

(a) Federal Reserve Site

(b) Parcel C-5

v. Pedestrian connection to Post Office is required.

c. Design Requirements

i. Retail uses at street level, Pedestrian Concourse Level, and upper levels shall be included to stimulate activity.

ii. The Great Space shall include large areas of skylighting and shall be predominately glass-enclosed to provide views of the city.

iii. All levels within the Great Space shall be completely climate controlled.

iv. Public toilets, information kiosks, and other user facilities shall be included within the Great Space at the Pedestrian Concourse Level.

v. The Great Space shall be designed so as to have maximum visual impact because it represents the entry to the downtown for some 60,000 daily users plus visitors.

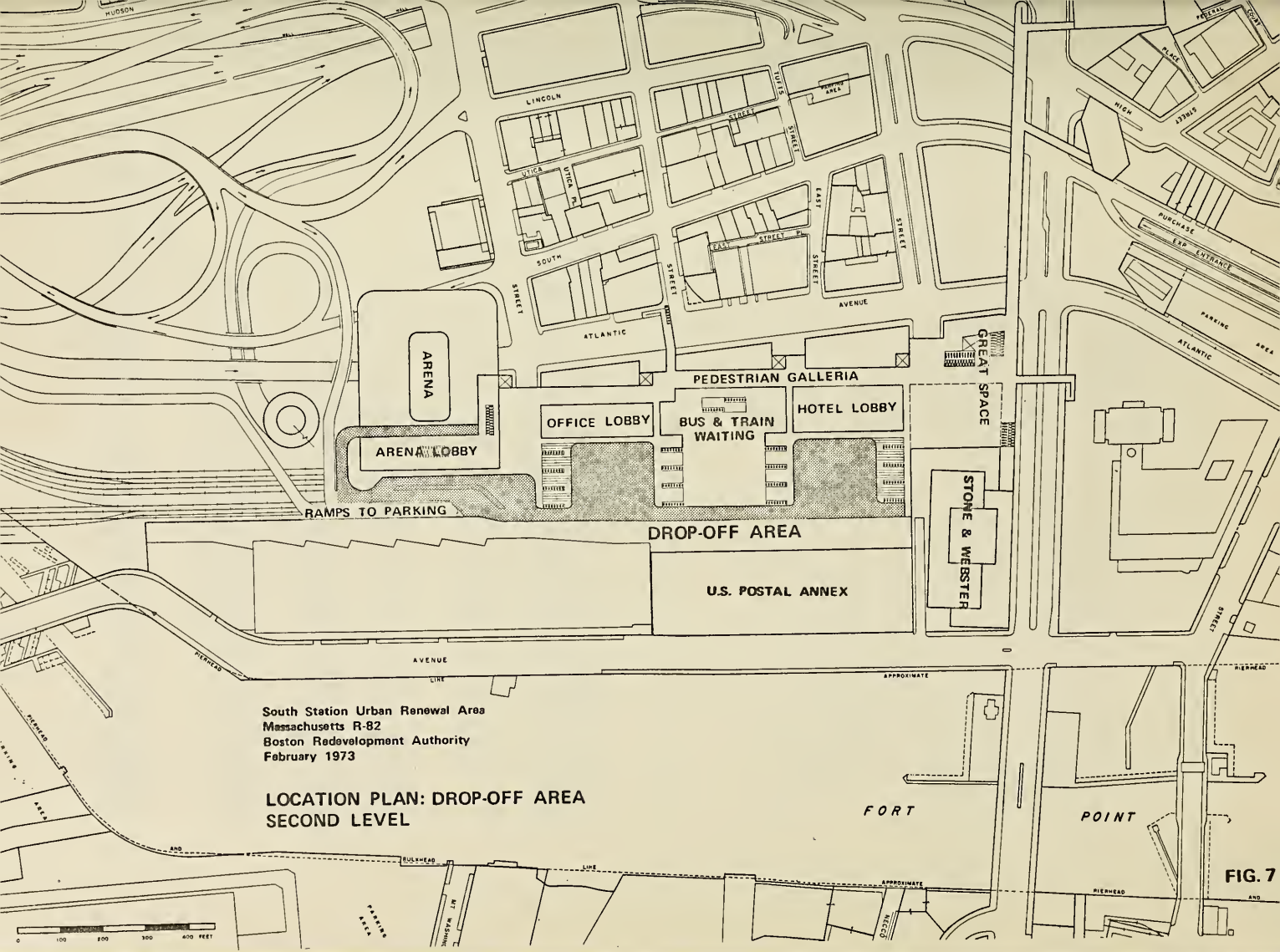
vi. An arcade at street level is required along Summer Street with set back of 20' from street line and height of 20'.

3. Drop-off/Pick-up Area (See Fig. 7)

An area is required to provide direct access for taxis, limousines, and private automobiles to lobbies of private use structures and to bus and train waiting areas at Level 2, el. +50.

a. Location: at same level as Pedestrian Concourse, above the railroad tracks, and between the Post Office and Pedestrian Galleria.

b. Functional Requirements



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LOCATION PLAN: DROP-OFF AREA SECOND LEVEL

FIG. 7

i. Vehicular access required from:

(a) Essex Street, 2 lanes
(b) Kneeland Street, 2 lanes
(c) Turnpike Expressway ramps, 2 lanes
(d) 3rd Harbor Tunnel, 2 lanes for bus, taxi and limousine

ii. Connections between drop-off/pick-up area and parking garage are required, 2 lanes.

iii. Pedestrian connections are required between Pedestrian Galleria and drop-off areas.

c. Design Requirements

i. A total area of 200,000 sq. ft. is required.

ii. Uses may include, in addition to drop-off/pick-up:

(a) Short term parking for bus, train, hotel, office buildings, etc.

(b) Auto rental

(c) Taxi stands

(d) Limousine service to air-port

4. Central Service Tunnel

The developer is required to provide a central service tunnel at the basement level because access to service areas at grade will be impossible from city streets, with bus, rail, and ramps occupying the entire site area at street level.

a. Location: the service tunnel may use parts of an existing sub-grade tunnel adjacent to lower level bus facility.

b. Functional Requirements

i. Access to the service tunnel shall be from Dorchester Avenue in the area immediately north of the Post Office.

ii. The service tunnel shall be located so that it is adjacent to the sub-grade loading docks at the elevator cores of all public and private elements.

iii. The tunnel shall provide service to all retail areas, including the retail strip along Atlantic Avenue between the Great Space and the Arena Lobby.

II. Private Elements

The South Station complex will include an arena and an office building for Stone & Webster, both of which will be developed by other developers but

which will be incorporated into the Master Plan. Space for major or ancillary retail uses, and available air-rights space for the development of one or more hotels, a convention center, and one or more additional office buildings shall be provided as follows:

A. Retail Uses (See Fig. 8)

100,000 sq. ft. of major or ancillary retail uses are required to stimulate activity in public spaces to help provide a safe and comfortable environment.

1. Location: Parallel to Atlantic Avenue, between Pedestrian Galleria and edge of parcel, mainly at Pedestrian Concourse level and also within and adjacent to the Great Space at street, 2nd and upper levels.

2. Functional Requirements

   a. Retail space shall be adjacent to major pedestrian routes within the Transportation Center.

   b. Major retail spaces should cluster around Great Space and Arena lobby, as in typical shopping center dumb-bell scheme.

B. Other Private Elements (See Fig. 9)

1. Location: Approximately 500,000 sq. ft. of air-rights above the parking garage is available for private development which may include hotel, convention center and office uses.

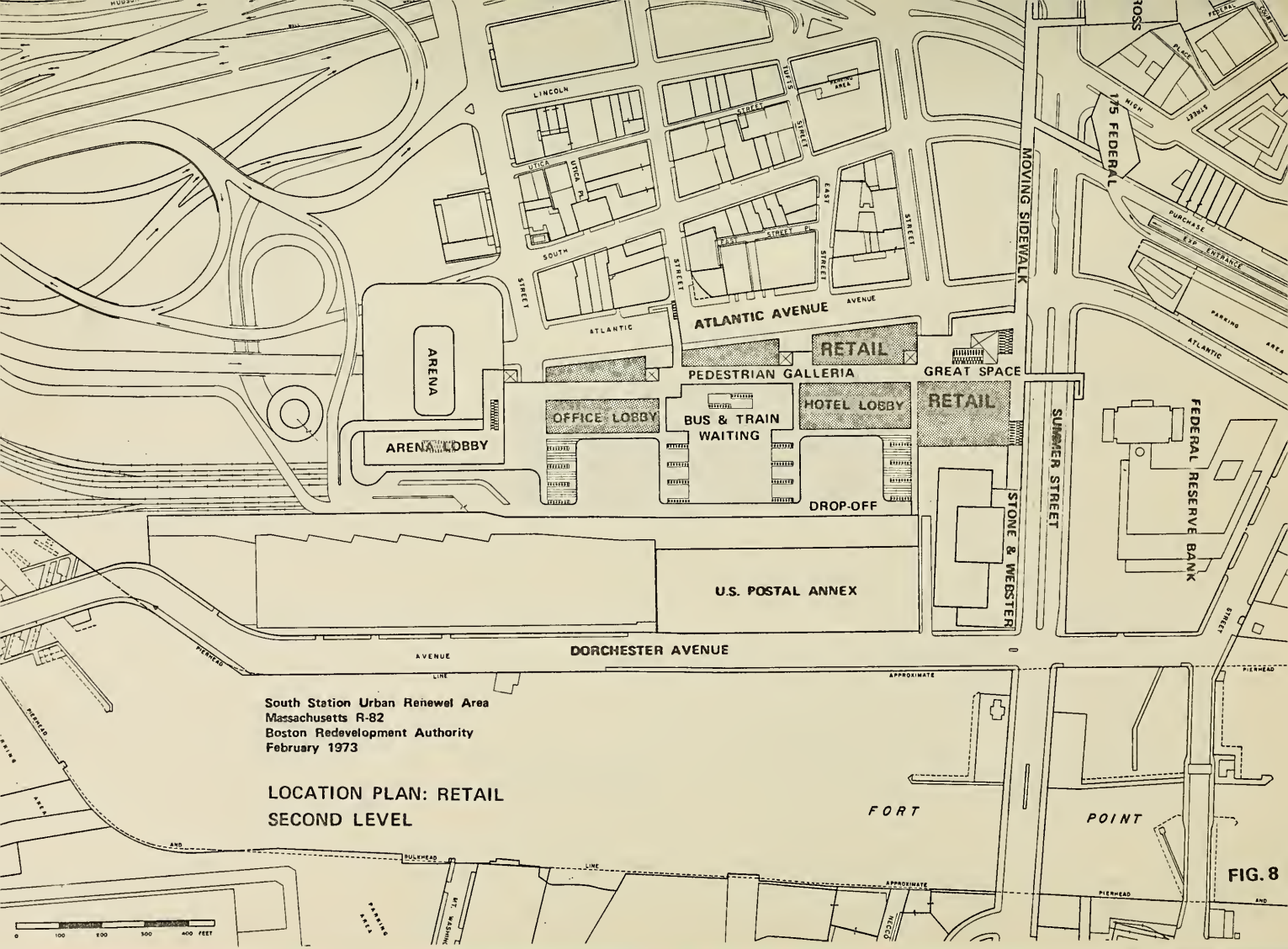
2. Functional Requirements:

   a. Lobbies for all private elements shall be located at the Pedestrian Concourse level between the auto drop-off area and the Pedestrian Galleria, accessible to both pedestrians and vehicles.

   b. Elevator cores may penetrate the garage below and offer direct access to private space from garage.

   c. The garage roof may be incorporated into private uses as open space, or may be developed for recreational use.

   d. Truck service docks shall be located at Basement Level adjacent to Central Service Tunnel.



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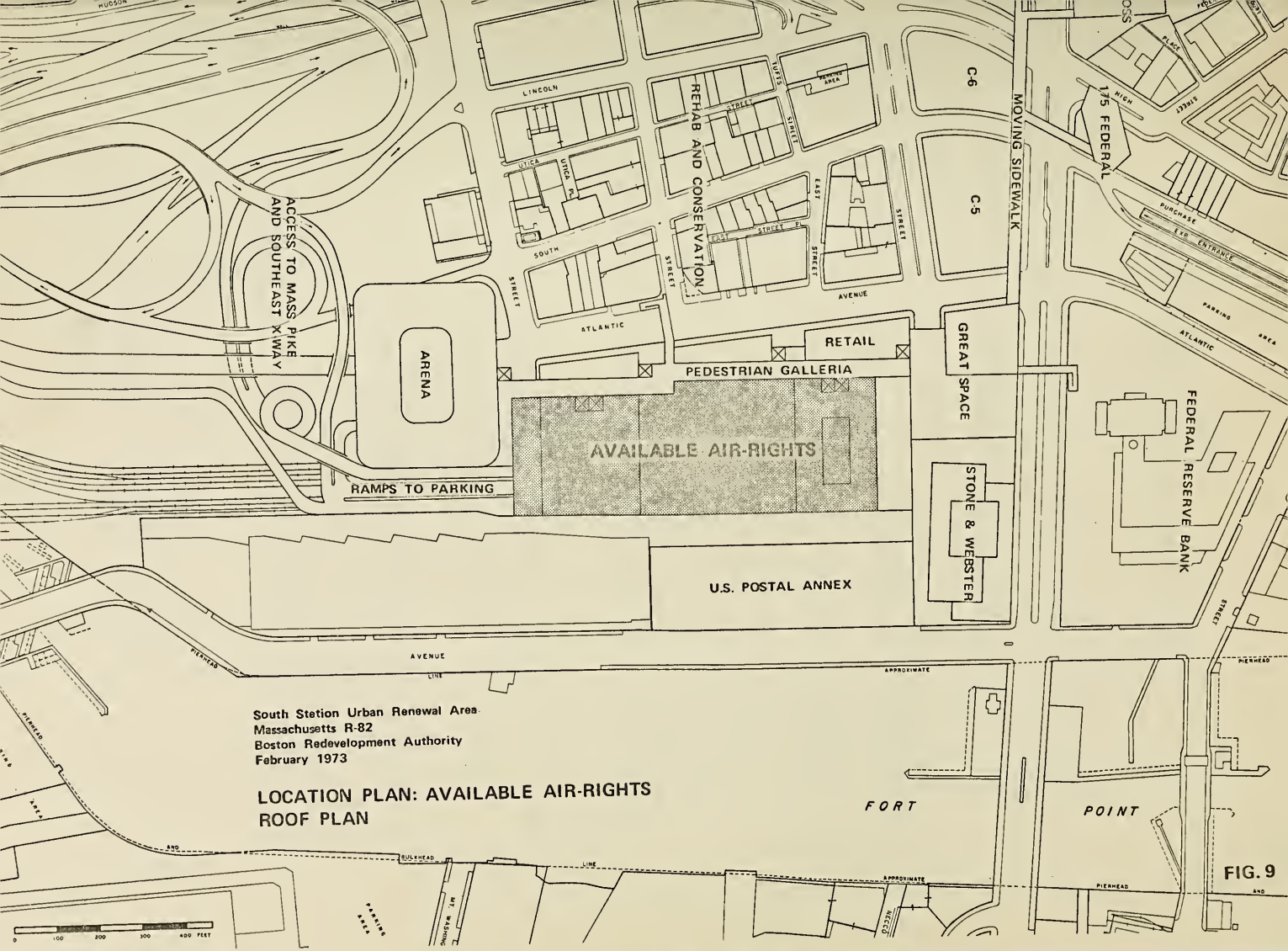
LOCATION PLAN: RETAIL SECOND LEVEL

FIG. 8



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LOCATION PLAN: AVAILABLE AIR-RIGHTS ROOF PLAN

FIG. 9

EXHIBIT C

Design Controls for Arena and Stone & Webster

A. Arena (See Fig. 10)

An 18,000 seat enclosed facility for hockey, basketball, circus, ice-capades, and other events.

1. Location: South of Kneeland Street over Turnpike and Expressway ramps on land owned by BRA and Mass. Turnpike Authority.

2. Required Functional Relationships:

   a. Pedestrian access via the moving sidewalk at Pedestrian Galleria Level 2. The Arena lobby shall terminate the Pedestrian Galleria at its southerly end.

   b. Pedestrian access from street level at corner of Kneeland Street and Atlantic Avenue.

   c. Pedestrian access from garage directly to Arena seating.

   d. Vehicular access from city streets to drop-off/pick-up area adjacent to Arena lobby.

   e. Truck service functions shall be accommodated off-streets and should be located between the on-ramp and off-ramp at Kneeland Street.

3. Design Requirements:

   a. The arena structure must not interfere with garage access ramps from Kneeland Street, and the Pike and Expressway.

   b. Arena construction shall not interfere with use of Turnpike and Expressway access and egress ramps.

   c. The arena shall be designed to provide a dramatic entry into the downtown area for motorists using ramps under the arena.

   d. The bottom of arena structure shall be no lower than el. ± 40'.

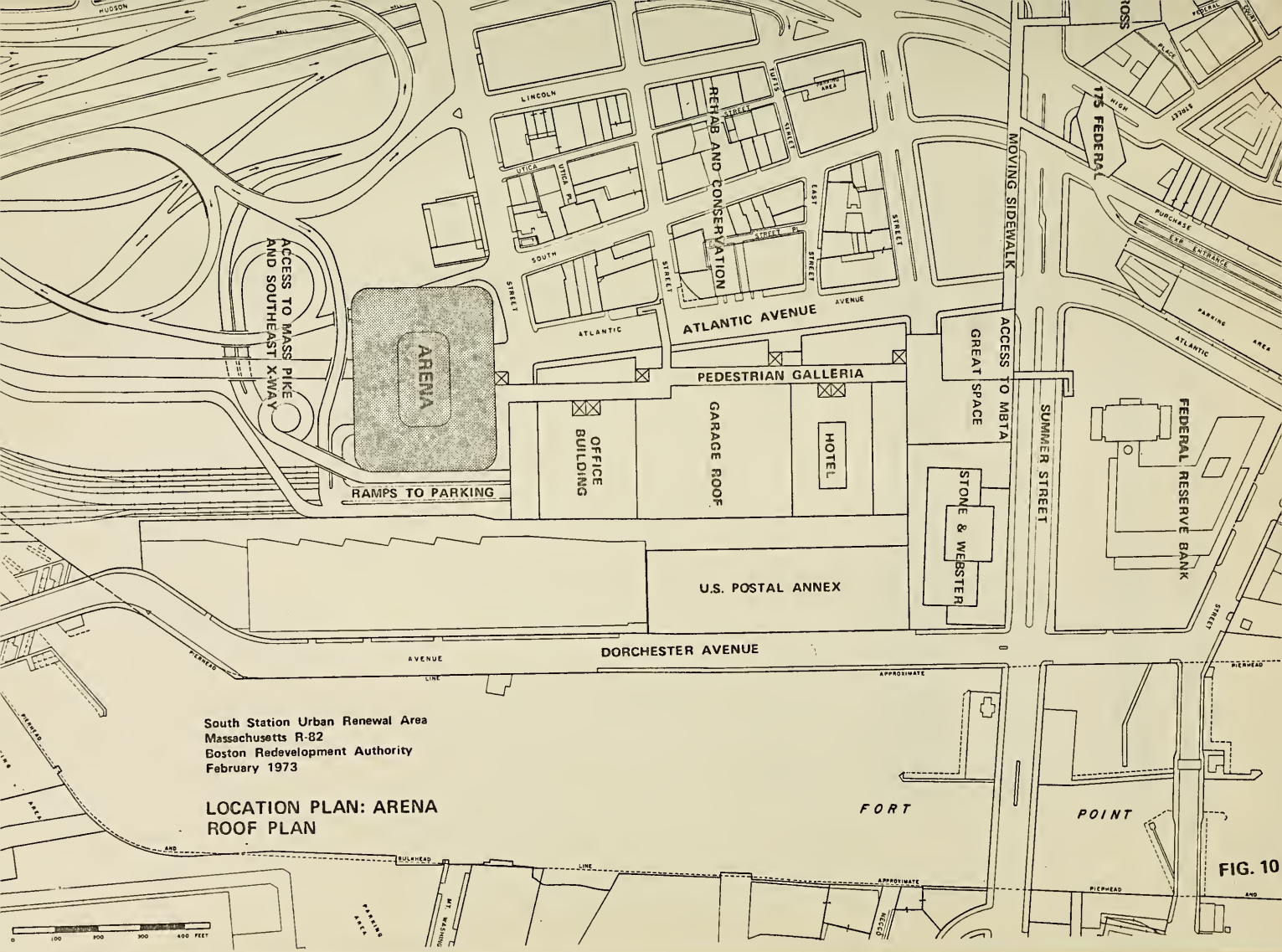
   e. A minimum of 71'-6" must be left empty between the Post Office property line and the centerline of columns at the easterly side of the arena.

B. Stone & Webster Office Building

A 900,000 square foot structure.

1. Location: The corner of Summer Street and Dorchester Avenue on 81,803 square foot site.

2. Functional Requirements:



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LOCATION PLAN: ARENA
ROOF PLAN

FIG. 10

a. The arcade along Summer Street is to be continuous with arcade of Great Space at street level in height and setback from street.

b. Retail uses are required at street level and are desirable at Level 2 and must be continuous with retail uses adjacent to the Great Space.

3. Design Requirements:

a. Truck docks and maneuvering space must be off city streets.

b. Arcade height must be no less than 20 feet.

c. The walking surface of the arcaded area must be continuous with the public sidewalk, and not separated by railings, steps or other impediments to the smooth flow of pedestrian traffic at street level.

EXHIBIT D

DEVELOPMENT SCHEDULE

Construction of the Transportation Center, public spaces, and private elements shall proceed as follows:

A. Transportation Center

1. New rail facilities, including waiting rooms, ticketing, and baggage areas - completion by Oct. 1, 1975
2. Bus Terminal - completion by Dec. 31, 1975
3. Garage - completion by Dec. 31, 1975
4. Public Spaces, etc. - completion by July 1, 1976

B. Private Elements

1. Hotel - completed by July 1, 1976
2. Office Building - completed by Jan. 1, 1977
3. Other Uses - completed by July 1, 1977